

We Claim:

1. A method of making a percussive transmission tube assembly for use between an initiation device and one or more detonation devices, said method comprising the steps of:
 - a. Providing at least two storage spools of transmission tube of the type having a percussive powder contained therein,
 - b. Paying the tubes off the spools and into a fixture designed to position the tubes in closely spaced generally parallel relationship to one another,
 - c. Introducing an adhesive bead to said fixture and between said spaced tubes,
 - d. Curing the adhesive to provide a transmission tube assembly which provides for redundant transmission of parallel signals, and which can also be readily split manually to separate the transmission tubes for connection to separated detonation devices.
2. A transmission tube assembly comprising at least two discrete transmission tubes arranged in axially parallel and adjacent relationship, each tube have a percussive powder composition inside the tubes,

an elongated adhesive strip sandwiched between said adjacent tubes along at least a substantially portion of the length of said tubes,

said tubes being extruded from a synthetic polymer and said adhesive being a polymeric adhesive or copolymer.
3. The invention of claim 1 or 2 above wherein said percussive powder comprises a crystalline pentaphenaltetranitrate or the equivalent.

4. The preceding claim plus said adhesive comprising an EVA copolymer with a vinyl acetate content ranging from 2% to 20% and preferably 12%.
5. The combination above further characterized by said synthetic polymer tubes constructed with an outer abrasion resistant layer of polyethylene or nylon.
6. The combination above wherein said tubes have an inner layer of Surlyn or the equivalent.
7. The combination set forth above further characterized by providing a spool for said redundant shock tube assembly, around which spool the redundant shock tube is wound for ease in deployment.
8. The combination above wherein packaging means is provided for said spool.
9. The combination described above wherein said fixture comprises an extruder nozzle for delivering the plastic bead from the nozzle between the tubes, and spring loaded roller pressing both tubes against the extruded plastic bead so as to assure adequate contact and bonding between the bead and the tubes.
10. The above described combination further characterized by cooling in the areas surrounding the bead between the tubes so as to cure and solidify the bead.
11. The combination described above wherein the plastic tube is fabricated from a plastic polymer having a vinyl acetate content between 2% and 20% by weight.
12. The combination of claim 11 wherein the preferred range is about 12% vinyl acetate by weight.
13. The combination described above wherein the vinyl acetate content is selected to achieve a predetermined pulling force required to separate the two tubes in the field, the higher vinyl acetate content requiring a higher separation force.

14. The combination described above wherein initiators and detonators are affixed to the redundant shock tube assembly at opposite ends thereof.
15. The combination described above wherein a detonator crimped to one end of the shock tube is provided on the spool, and a protective cap is provided on the other end of the redundant shock tube, both being mounted on the end of a spool so that the spool can be housed in an opening sided container.
16. The combination set forth above further including a flange on the spool housing the coiled redundant shock tube, the flange being configured with a tapered exit hole, where the tube assembly exits the barrel of the spool, in order to avoid snagging of the tube during rapid deployment of the tube from the spool.
17. The combination above wherein each tube is of different external color for identification purposes.